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Orchestrating Multiple Goals across Adulthood: From *solo* to *tutti*

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Abstract

Rather than focusing on single goals, people usually strive for multiple goals in different domains of life at the same time. To do so successfully, people need to match their multiple goals to their opportunity structures, maintain sufficient diversity in their goal system, and consider the positive and negative trade-offs between particular goals. This issue brings together five original research articles to advance this topic. Situated at the intersection of developmental and motivational psychology, these papers assess goals in the domains of work, family, leisure, and academic achievement. They draw upon data from the United States, Germany, Finland, and Switzerland, and on samples that range from late adolescence to late adulthood. All of the studies are longitudinal, and two use diary methods or high-frequency ambulatory assessments to address methodological issues. This introduction provides a theoretical framework for interpreting the contributions of the papers, which are also highlighted, as well as a brief outlook on open research questions in the field.

Keywords: goal conflict; multiple goals; prioritization

Goals as Building Blocks of Development in Adulthood

Goals are defined as "desired states that people seek to obtain, maintain or avoid" (Emmons, 1996, p. 314) and can be considered as "building blocks of personality and development in adulthood" (Freund & Riediger, 2006, p. 353). They give direction and meaning to a person's life (Freund, 2007; Klinger, 1977; Little, 1989), guide attention and behavior (e.g., Bargh & Ferguson, 2000), and represent the standard for evaluating performance (e.g., Bandura, 1989), which in turn can affect subjective well-being (e.g., Brunstein, 1993). One of the most important dimensions for understanding developmental regulation across the life span is learning how individuals commit to, engage with, and abandon goals vis-à-vis their personal resources and the contextual opportunities and constraints (e.g., Heckhausen, 1999).

The most prominent theories of developmental regulation (Baltes & Baltes, 1990; Schulz & Heckhausen, 1996) argue that because humans are endowed with "open behavior programs" (see Mayr, 1974) and simultaneously face finitude and limits to their resources (see Kahneman, 1973; Kruglanski, Bélanger, Chen, & Köpetz, 2012), adaptive developmental regulation must encompass some form of *selectivity* in order to optimize their development (e.g., Freund & Baltes, 1998). In other words, being selective is not only necessary to give direction to life but is also a good strategy for the efficient investment of limited resources.

Criteria of Adaptive Goal Setting

But which goals should individuals select and which not? Schulz and Heckhausen (1996; see also Heckhausen, Wrosch, & Schulz, 2010) have proposed three criteria by which the adaptive value of goal selection can be judged. All three are closely related to the concept and content of this issue.

First, individuals should take into account the opportunity structures for goal

attainment and select goals for which opportunities are sufficiently favorable. Otherwise, they risk wasting their resources by striving for goals that are futile. They are also likely to encounter repeated experiences of failure, which can threaten their motivational and emotional capacities. As opportunities wax and wane across time (e.g., Heckhausen, Wrosch, & Fleeson, 2001) and place (e.g., Tomasik & Silbereisen, 2012), adaptive goal selection requires constant and careful adjustment, making it a process rather than a static entity. Methodologically, this fact requires longitudinal studies, and one of the eligibility criteria for the inclusion of papers in this issue was that results be based on longitudinal data.

Second, selectivity should not be absolute in the sense that one goal is selected and all others are abandoned. Rather than "putting all one's eggs in one basket," it is more adaptive to maintain some diversity in one's goal system. This not only maximizes the prospects for attaining some of the goals selected but also minimizes the risk of a "total loss" if the attainment of single goals becomes no longer possible. With this criterion, we arrive at the core of the papers in this issue. Indeed, scientific evidence and everyday experience tell us that most people pursue *multiple* goals at the same time, some pertaining to multiple life domains such as work or education, and some to the same life domain (e.g., Riediger & Freund, 2006). However, theoretical and empirical research on this issue is limited, which was one of the primary reasons to compile the studies contained in this issue.

The third criterion is that goal selection should take into account the positive and negative trade-offs between single goals. On one hand, when people are pursuing multiple goals, they may encounter goal conflicts because either goal-related resources are limited or attainment strategies for some goals are incompatible with the attainment strategies for others (Riediger & Freund, 2004). On the other hand, one goal

or a set of goals can also facilitate others (Riediger, 2007). This might result either from instrumental relations among goals or from overlapping goal attainment strategies (Riediger & Freund, 2004). These intergoal relations together with their consequences for psychological adjustment and development are the central process investigated in the following papers.

Strategies of Adaptive Goal Pursuit

Observing opportunities and constraints for goal attainment, maintaining sufficient diversity in one's goal system, and considering both positive and negative trade-offs between multiple goals represent developmental challenges—challenges for which individuals have developed various regulation strategies. For instance, individuals can negotiate multiple goals by employing strategies of concurrent or strategies of sequential goal pursuit (Orehek & Vazeou-Nieuwenhuis, 2013). Concurrent strategies usually comprise using single multifinal means to purse multiple goals at the same time (Köpetz, Faber, Fishbach, & Kruglanski, 2011), whereas sequential strategies require prioritizing the allocation of one's resources to one goal at a time (Riediger & Freund, 2008).

In our own research (for an overview, see Tomasik & Freund, 2015), we focused on strategies of prioritization and ran a series of lab studies to investigate how individuals mastered a goal conflict that was only possible to solve by engaging in one goal and disengaging from the other. Our new work is revealing that prioritization is not only an effective means to solve goal conflicts, but also that older people are better in prioritizing. The age effect we found suggests that the management of trade-offs might be closely linked to personal resources for goal attainment that usually follow a distinct trajectory across the life span and tend to deteriorate with age. This example therefore shows that the three criteria suggested are not independent from each other but rather

moderate each other in complex ways. This makes the study of multiple goals across the life span a fascinating but complicated endeavor.

Current Research on Multiple Goals

Sharing this fascination, the authors of the papers have focused on the topic of multiple goals, leveraging different theoretical approaches and samples that differ in age and by countries, regions, and other characteristics. The first paper by Shane and Heckhausen used data from two waves of the Midlife in the United States National Longitudinal Study of Health and Well-Being (MIDUS). It applied the framework of the motivational theory of life-span development (Heckhausen et al., 2010), and explicitly or implicitly tested all three of the criteria proposed above. Concerning the match of personal goals with opportunities and constraints, the authors found that adults indeed matched their engagement with shifting opportunities as they age. They also found that most adults were engaged in simultaneous goals in multiple domains, and that their goals systems were highly diverse. Most importantly, however, Shane and Heckhausen showed that adults can be quite efficient in coordinating the positive and negative trade-offs of multiple goal engagement across different domains of life. In all domains examined, higher engagement in one domain was predictive of a more positive correlation between engagement, quality, and perceived control in other domains. In other words, engagement with multiple goals was on average associated with increased synergies between these goals. This is an intriguing result that opens the question of whether individuals actually perceive their multiple goal-striving as synergistic or not.

The second paper by Knecht and Freund explicitly addresses this issue by studying the consequences of multiple goal striving for subjective well-being and perceived goal relations. The authors used data from a sample that was of similar age as the MIDUS sample but lived and worked in Switzerland. The methodological feature of

this study was its measurement burst design with over 120 assessments on 20 consecutive days in actual everyday situations. The starting point of this research was the observation that contemporary work place arrangements and the spread of modern communication technologies increasingly blurs the boundaries between work, family, and leisure (e.g., Allen, Cho, & Meier, 2014). Would this have rather positive or negative consequences on subjective well-being and perceived goal relations? The answer to this question seems to depend on whether the different goal contexts and contexts for goals striving were incongruent or whether they were integrated. Results showed that incongruity was negatively related to indicators of subjective well-being, to lower perceived facilitation between the respective goals, and to higher perceived conflict. The opposite was true for instances of integration. Despite the consistent picture portrayed by Knecht and Freund, one question remains open. By design, the authors did not explicitly measure the different demands encountered by the individuals in the different domains of life, which probably influences how much integration is possible.

The third paper by Tomasik and Silbereisen focusses exactly on such demands in the domains of work and family life. The authors capitalized on four waves of data collected in Germany right before the outset of the global financial and economic crisis in 2007 (see Silbereisen, Tomasik, & Reitzle, 2012). The demands investigated in a sample of adults aged 16 to 43 years in part referred to economic uncertainty related to the crisis but also to uncertainty concerning one intimate relationship and family life as well as demands related to excessive expectations at the work place. All three clusters of demands were modeled as individual latent trajectories over time and the authors analyzed the interrelations between these trajectories as well as their sociodemographic correlates. Two findings are particularly relevant in the present context. First, the authors found some evidence of a cumulative disadvantage effect in

the sense that those who already reported a high load of demands at the outset of the study increasingly did so across the course of the following four years. Second, however, these participants appeared at the same time to be inoculated against the surge of uncertainty related to the global financial crisis whereas those initially reporting low demands were struck quite markedly in terms of perceived uncertainty. Taken together, these findings do only highlight the importance to consider the broader social and economic context when studying multiple goals but also point to the need to explicitly measure demands in the different domains of life.

The fourth paper by Segerstrom et al. addresses the issue of possible excessive demands that has not been addressed by the first three studies. The authors drew on a study of women in middle and older age in which those reporting the experience of mild to moderate chronic pain were deliberately oversampled. The rationale of the paper was that the experience of pain would limit resources available for goal striving in other domains of life and probably also affect the perceived conflict between these goals. This might or might not compromise subjective well-being. On the one hand, previous studies have shown that goal conflict can have adverse consequences for subjective well-being (e.g., Riediger & Freund, 2008) and psychosomatic health (e.g., Freund, Knecht, & Wiese, 2014). On the other hand, avoiding goal conflict by disengaging from goals can be negative from a control theoretical perspective (e.g., Carver & Scheier, 1990) as it deprives the individual from the potential benefits of goal striving and eventual goal attainment. Contrary to their expectations, Segerstrom et al. did not find a main effect of goal conflict on subjective well-being. However, they found that for women with pain higher goal conflict was positively correlated with subjective well-being whereas for women without pain this correlation was negative. This finding is striking and urges us to reconsider the issue of causality in the study of multiple goals.

The fifth paper by Flunger, Marttinen, Tuominen-Soini and Salmela-Aro drew on data of a sample of young adults from Finland and focused exclusively on achievement-related goals. The authors conceptualized the multiplicity of goals in terms of different achievement-related orientations that may or may not occur in combination. Young people could, for instance, be motivated to acquire new knowledge and/or to do better than others and/or to put forth as little effort as possible when striving for academic goals (see Niemivirta, 2002). Flunger and her colleagues argued that these multiple orientations have meaningful associations with the youth' identity development status and with various aspects of goal striving such as commitment, effort, and progress. Using latent change score models, they found significant positive associations of mastery-related goal orientations (i.e., motivation to acquire new knowledge and motivation to succeed at studying) with identity exploration and identity commitment as well as with goal effort. Consequently, they argued that high exploration and commitment as well as high effort may serve young adults as a resource for orchestrating multiple goal orientations towards the usually most adaptive mastery-related style. Although limited to the academic domain, this study points to possible developmental precursors of how multiple goals might be approached.

Conclusion

Taken together, the papers compiled both answer important questions related to studying multiple goal pursuit and illustrate the possible directions that the study on multiple goals could take in the future. Shane and Heckhausen convincingly showed that maintaining diversity in one's goal structure is not necessarily associated with costs and trade-offs but rather can bring about synergies for all respective goals. From a theoretical perspective, maintaining diversity while observing the various intergoal relations thus may not only be considered a developmental challenge but also as a good

strategy to optimize goal striving in the respective life domains. One may now ask about interindividual differences or who is better in constructing his or her goal system in a way that maximizes these synergies and why.

Knecht and Freund provided evidence for everyday processes related to a successful negotiation of multiple goals in different domains of life. They pointed to the beneficial aspects of integrating goals between multiple domains. This integration might be a key strategy to manage diversity and at the same time to profit from positive trade-offs between different goals. Future research should investigate in more details whether a successful integration is more a question of individual variables such as self-efficacy, for instance, or structural variables such as family-related policies at the work place.

Tomasik and Silbereisen emphasized the role of contexts and how changes in the contextual opportunities might refer to multiple goals striving. This directly refers to the first criterion of adaptive goal setting. They showed that both cumulative disadvantage and inoculation effects may occur when multiple demands are examined over time. Are these complementary processes that result in a set-point in the long run or does one process overlap the other, and if yes, under what contextual circumstances does that happen?

Segerstrom and her collaborators demonstrated that an apparent limitation in goal-related resources does not necessarily need to be associated with more conflict between multiple goals. If these results cannot be explained by reverse causality, they might point to some undiscovered strategies of how people regulate negative trade-offs between multiple goals. Future research might examine the exact strategies that are relevant for this effect and whether these strategies could also be successfully applied outside the clinical context?

Finally, Flunger and her colleagues elucidated possible developmental

precursors of an adaptive orientation towards goals. Emerging work is revealing how goal orientations play important roles in negotiating conflicting goals outside the academic context, but we do not know very much about how these goal orientations develop in adolescence. Could the precursors suggested by Flunger and her collaborators also be associated with a more successful mastery of multiple goals later in the life span?

These and other question await further scientific investigation by those who are inclined to study the complexity of multiple goal striving in the future. This complexity requires further theoretical elaboration on what makes an individuals' goal system comprising multiple goals more adaptive as compared to another. To be successful, this work should probably take the theoretical standpoint of a conductor of an orchestra that ought to be more interested in the interplay of all instruments rather than the fine tuning of single ones: that is, from *solo* to *tutti*.

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